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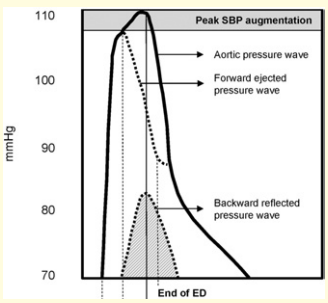
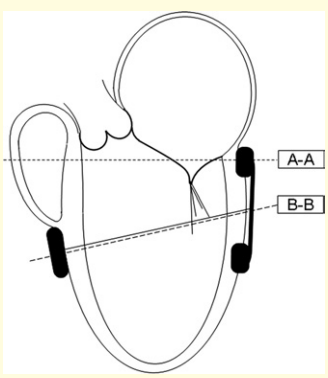
# Inside This Issue

STATE-OF-THE-ART PAPER




CLINICAL RESEARCH



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ANTIPLATELET THERAPY AND CORONARY SURGERY



Clopidogrel increases the risk of perioperative bleeding in patients undergoing coronary artery bypass grafting and also has significant interindividual variability. Kwak and colleagues correlated the percent platelet inhibitory response to clopidogrel by modified thromboelastography with bleeding and transfusion requirements following off-pump coronary artery bypass graft (OPCABG) surgery. A total of 100 patients receiving clopidogrel within 5 days of OPCABG were prospectively enrolled. Blood loss was higher and there was an 11-fold increased need for transfusion in patients in the highest tertile of platelet inhibition compared with the lowest tertile. Platelet inhibitory response to clopidogrel, regardless of the timing of last clopidogrel exposure, predicts bleeding risk after OPCABG.

*Editorial Comment: Gilles Montalescot, Jean-Sébastien Hulot, Jean-Philippe Collet, p. 2003*

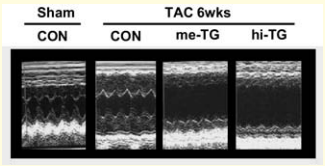
CAROTID INTIMA-MEDIA THICKNESS AND EVENTS



Increases in carotid intima-media thickness (IMT) are associated with a higher risk of coronary heart disease (CHD) and cerebrovascular (CBV) events; however, it is undetermined if IMT regression reduces the risk of these events. Costanzo and colleagues performed a meta-regression analysis to test this relationship. A total of 41 trials enrolling 18,307 participants were included. Despite significant reduction in CHD, CBV events, and all-cause mortality induced by active treatments, there was no significant relationship between IMT regression and these events. Regression or slowed progression of carotid IMT, induced by drug therapies, is not predictive of cardiovascular events.

*(continued on page A-32)*

PRE-CLINICAL RESEARCH




PRE-CLINICAL RESEARCH



Zhang and colleagues explored the relationship between cardiomyocyte phosphodiesterase type 5 (PDE5) expression and maladaptive remodeling. Mice with doxycycline controllable myocyte-specific PDE5 gene expression were generated and were then subjected to sustained pressure-overload via aortic banding. Heart function was normal at baseline, but after aortic banding, transgenic hearts developed more eccentric remodeling, maladaptive molecular signaling, depressed function, and amplified fibrosis compared with nontransgenic mice. High-PDE5 mice received doxycycline to suppress the excess PDE5 expression/activity after developing a cardiomyopathy, and showed normalization of the maladaptive remodeling. These data support a primary role of myocyte PDE5 regulation in myocardial pathobiology.

*Editorial Comment: Roger J. Hajjar, Fadi G. Akar, p. 2031*

YEAR IN CARDIOLOGY SERIES

YEAR IN CARDIOLOGY SERIES



Weyman reviews several papers published in the last year regarding echocardiography. The role of echo Doppler techniques in the evaluation of diastolic function, particularly the accuracy of the E/e′ ratio in assessing left atrial pressure, was the subject of several papers and was found to be accurate in only certain subsets of patients. In the area of valvular heart disease, 3-dimensional (3D) echocardiography studies visualized mitral leaflet morphologic adaptation to chronic tethering. New insights were also reported in a variety of other areas including the impact of contrast echo on clinical decision making in patients with technically difficult studies, 3D speckle tracking, and the utility of delayed diastolic relaxation as a marker of ischemia.